APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,075	01/30/2006	Rogier Noldus	P18279-US3	2176

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ERICSSON INC.
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EXAMINER
TAYLOR, BARRY W

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
04/08/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>22 January 2009</u>.

2a) ☒ This action is FINAL.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-16</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☐ Claim(s) _____ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>30 January 2006</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

1.   Claims 1-4, 7-8, 10-11, 13-16 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Applicants Admitted Prior Art (hereinafter AAPA) in view of Bhaumick

(2004/0248546).

Regarding claim 11. AAPA teaches a network node for a telecommunications

network comprising an input unit for receiving unstructured supplementary service data

from at least one mobile station, comprising a processing unit for processing said

service data, means for maintaining location information of said at least one mobile

station (see Applicants specification in Pub. No.: US 2006/0229084 paragraphs 0003 -

0013 wherein Mobile station sends unstructured supplementary service data to network

wherein USSD contains the cell identifier where the Mobile Station is roaming).

AAPA does not show wherein said processing unit is arranged for including said

location information of said at least one mobile station in said service data, instead the

Mobile Station sends USSD plus cell identifier to MSC.

Bhaumick also discloses that prior art (see paragraph 0005) teaches the mobile

radio apparatus transmits USSD containing the mobile stations current location to MSC.

Bhaumick discloses the drawback of having the mobile send USSD containing the

mobile stations current location is that special module or interface is needed in every

mobile station and the software and/or hardware of each HLR must also be modified.

Therefore, Bhaumick teaches the updating location information of the mobile station

without the need to have the mobile station send USSD containing the mobile stations

current location (paragraph 0006). Bhaumick teaches the location of the mobile station

is determined based on the individual cells of base stations (paragraph 00008) wherein

the base station and/or node of the cell in which the mobile station is situated at the time

updates and stores the location information of the mobile (paragraph 0008). Bhaumick

discloses the advantage of updating and storing location information of the mobile at the

base station or node is that the entry of location information in a central database can

be updated (paragraph 0008 lines 37-45, see data messages used to update a central

database in paragraph 0009). Bhaumick teaches updating location information of a

mobile by means of USSD messages that is sent from a base station or node to a

central database (paragraphs 0014 - 0017). Bhaumick teaches the location information

of the mobile is then used for billing and providing location based services to the mobile and the record further includes location information indicating to which MSC the mobile station is momentarily allocated (paragraph 0019). Bhaumick further discloses that when a mobile leaves the geographical area covered by an MSC and enters the area covered by another MSC the data record for the mobile station is transferred to the other MSC by means of USSD message (paragraph 0019 lines 75-107). Bhaumick teaches that SMS messages may be used to obtain the current cell id where the mobile is currently located (paragraphs 0021, 0026).

It would have been obvious for any one of ordinary skill in the art at the time of invention to modify AAPA with the teachings of Bhaumick in order to update the mobile stations location by having the base station forward the cell id of the mobile station current location to a central database thereby saving system cost by not having each mobile station contain special modules or interfaces as disclosed by Bhaumick.

Regarding claim 1. Method claim 1 is rejected for the same reasons as apparatus claim 11 since the recited elements would perform the claimed method.

Regarding claims 2 and 13. Bhaumick teaches wherein said network node forwards said service data to a storage unit (see paragraph 0008 wherein Bhaumick teaches the location of the mobile station is determined based on the individual cells of base stations wherein the base station and/or node of the cell in which the mobile station is situated at the time updates and stores the location information of the mobile. Bhaumick discloses the advantage of updating and storing location information of the

mobile at the base station or node is that the entry of location information in a central database can be updated (paragraph 0008 lines 37-45, see data messages used to update a central database in paragraph 0009). Bhaumick teaches updating location information of a mobile by means of USSD messages that is sent from a base station or node to a central database (paragraphs 0014 - 0017). Bhaumick teaches the location information of the mobile is then used for billing and providing location based services to the mobile and the record further includes location information indicating to which MSC the mobile station is momentarily allocated (paragraph 0019). Bhaumick further discloses that when a mobile leaves the geographical area covered by an MSC and enters the area covered by another MSC the data record for the mobile station is transferred to the other MSC by means of USSD message (paragraph 0019 lines 75-107). Bhaumick teaches that SMS messages may be used to obtain the current cell id where the mobile is currently located (paragraphs 0021, 0026).

Regarding claims 3 and 14. Bhaumick teaches wherein said storage unit is a Home Location Register (see paragraph 0008 lines 41-44 wherein the central database may typically be a home location register).

Regarding claims 4 and 15. Bhaumick teaches wherein said storage unit is associated with an external service node (see paragraph 0019 lines 75-107 wherein MSC's may transfer mobile station location information to one another).

Regarding claim 7. AAPA teaches location of subscriber used for location-based charging (see Applicants specification Pub. No.: US 2006/0229084 paragraph 0006).

Bhaumick also teaches location of subscriber used for billing (paragraph 0019 lines 51-57).

Regarding claim 8. AAPA teaches location of subscriber used for time-dependent charging (see Applicants specification Pub. No.: US 2006/0229084 paragraph 0007). Bhaumick also teaches location of subscriber used for billing (paragraph 0019 lines 51-57).

Regarding claims 10 and 16. Bhaumick teaches the network node is a mobile services switching centre (see paragraph 0019 lines 44-107 wherein Bhaumick further discloses that when a mobile leaves the geographical area covered by an MSC and enters the area covered by another MSC the data record for the mobile station is transferred to the other MSC by means of USSD message).

2.   Claims 5-6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art (hereinafter AAPA) in view of Bhaumick (2004/0248546) further in view of Koster (2005/0009499 hereinafter Koster).

Regarding claims 5 and 12. Bhaumick does not explicitly show wherein said network node further includes a Reference Number in said service data. However, Bhaumick does teach using cell id to determine where the mobile station is currently located to produce mobile station location records which are then used for billing and offering location-based services to mobile stations.

Koster teaches systems and methods for billing a mobile wireless subscriber for location services (title, abstract) wherein billing of subscribers of wireless services based on a rating profile comprising antenna information, sector information, and a

billing rate as applied to call detail records generated in association with wireless communications (paragraphs 0001, 0043, 0044). Koster also teaches time-based billing (paragraphs 0007, 0012, 0056). Koster teaches CDR records having record id which concatenates a switch identifier with a date/time stamp (paragraph 0047). Koster teaches using a Network ID to indicate the network that the call originated on (paragraph 0050) which allows a service provider to identify separate networks. Koster teaches using antenna field used to uniquely identify antenna (paragraph 0050). Koster teaches concatenating a Mobile Switch Center identifier with the antenna number (paragraph 0050). Koster even teaches using a sector number (paragraph 0051). Koster teaches that the switch typically records call detail records in chronological order for all subscribers served by the switch and a billing system then combines the call records for a single mobile subscriber into a single file (paragraphs 0053 - 0056).

It would have been obvious for any one of ordinary skill in the art at the time of invention to modify the teachings of AAPA in view of Bhaumick to use a reference number as taught by Koster in order to bill wireless subscribers based on subscribers location at the time the call was made as disclosed by Koster.

Regarding claim 6. AAPA in view of Bhaumick teach forwarding location information of a mobile station to a central database for billing but fail to show using a reference number to correlate a service data call detail records.

Koster teaches systems and methods for billing a mobile wireless subscriber for location services (title, abstract) wherein billing of subscribers of wireless services based on a rating profile comprising antenna information, sector information, and a

billing rate as applied to call detail records generated in association with wireless

communications (paragraphs 0001, 0043, 0044). Koster also teaches time-based billing

(paragraphs 0007, 0012, 0056). Koster teaches CDR records having record id which

concatenates a switch identifier with a date/time stamp (paragraph 0047). Koster

teaches using a Network ID to indicate the network that the call originated on

(paragraph 0050) which allows a service provider to identify separate networks. Koster

teaches using antenna field used to uniquely identify antenna (paragraph 0050). Koster

teaches concatenating a Mobile Switch Center identifier with the antenna number

(paragraph 0050). Koster even teaches using a sector number (paragraph 0051).

Koster teaches that the switch typically records call detail records in chronological order

for all subscribers served by the switch and a billing system then combines the call

records for a single mobile subscriber into a single file (paragraphs 0053 - 0056).

 It would have been obvious for any one of ordinary skill in the art at the time of

invention to modify the teachings of AAPA in view of Bhaumick to use a reference

number as taught by Koster in order to bill wireless subscribers based on subscribers

location at the time the call was made as disclosed by Koster.

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Applicants Admitted Prior Art (hereinafter AAPA) in view of Bhaumick (2004/0248546)

further in view of Elliott et al (2008/0095339 hereinafter Elliott).

 Regarding claim 9. AAPA in view of Bhaumick do not explicitly show wherein

said storage unit keeps a register of location identifiers, such as cell identifiers or

service area identifiers, mapped on geographical time zone data, and a correction factor

applicable for any cell that resides in a time zone different from the time zone of said

network node.

Elliott teaches transferring billing information across telephone switches wherein

a time offset is used to account for different time zones and daylight savings time

changes (paragraphs 3361, 3367, 3401) which allows switches to store accurate timing

data related to call detail records. Elliott also teaches using unique identifier so call

records from a plurality of switches can be combined in the call detail record

(paragraphs 3362, 3363, 3369, 3370, 3372).

It would have been obvious for any one of ordinary skill in the art at the time of

invention to modify AAPA in view of Bhaumick to use an offset and unique identifier as

disclosed by Elliott in order to allow the network to account for different time zones and

daylight savings time changes when creating call detail records for telephone calls that

cover different geographic locations as disclosed by Elliott.

Response to Arguments

4.   Applicant's arguments filed 1/22/2009 have been fully considered but they are

not persuasive.

a) Applicants argue (see paper dated 1/22/2009, starting on page 5 and

continuing to page 6) that AAPA in view of Bhaumick do not show the at least one

mobile station initiates a USSD message, which is received by the network node. The

node, to which the mobile station is attached, is in a good position to know the location

of the mobile station. So, a processing unit in the network node adds location

information to the USSD.

The Examiner disagrees. Bhaumick teaches the updating location information of the mobile station without the need to have the mobile station send USSD containing the mobile stations current location (paragraph 0006). Bhaumick teaches the location of the mobile station is determined based on the individual cells of base stations (paragraph 00008) **wherein the <u>base station and/or node</u> of the cell in which the mobile station is situated at the time updates and stores the location information of the mobile (paragraph 0008).** Bhaumick discloses the advantage of updating and storing location information of the mobile <u>**at the base station or node**</u> is that the entry of location information in a central database can be updated (paragraph 0008 lines 37-45, **see data messages used to update a central database in paragraph 0009**). Bhaumick teaches updating location information of a mobile <u>**by means of USSD messages that is** sent from a base station or node to a central database</u> (paragraphs 0014 - 0017). Bhaumick teaches the location information of the mobile is then used for billing and providing location based services to the mobile and the record further includes location information indicating to which MSC the mobile station is momentarily allocated (paragraph 0019). Bhaumick further discloses that when a mobile leaves the geographical area covered by an MSC and enters the area covered by another MSC **data record for the mobile station is transferred to the other MSC by means of USSD message** (paragraph 0019 lines 75-107). Bhaumick teaches that SMS messages may be used to obtain the current cell id where the mobile is currently located (paragraphs 0021, 0026).

It would have been obvious for any one of ordinary skill in the art at the time of invention to modify AAPA with the teachings of Bhaumick in order to update the mobile stations location by having the base station forward the cell id of the mobile station current location to a central database thereby saving system cost by not having each mobile station contain special modules or interfaces as disclosed by Bhaumick.

b) Applicants make the same argument for dependent claims 5-6 and 12 (see bottom page 6, paper dated 1/22/2009).

The Examiner used Koster to teach using a reference number to correlate a service data call detail record.

c) Applicants argue that the present application and Syed et al were, at the time the invention of the present application was made, both owned by or subject to an obligation of assignment to Ericsson Inc., etc. Therefore disqualify the Syed reference.

The Examiner has removed the Syed reference.

d) Applicants skip the rejection for claim 9 (see bottom of page 7, paper dated 1/22/2009).

The Examiner used Elliott to teach time-dependent charging wherein cell id or service area identifiers are mapped to geographic time zone data.

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

6.　　　Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Barry W. Taylor, telephone number (571) 272-7509, who
is available Monday-Thursday, 6:30am to 5pm.
　　　　If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Dwayne Bost, can be reached at (571) 272-7023. The central facsimile phone
number for this group is **571-273-8300**.
　　　　Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the Group 2600 receptionist whose telephone number is
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Patent Application Information Retrieval (PAIR) system. Status information for
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deliveries must be made to the Customer Service Window (now located at the Randolph
Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must
be sent to the central fax number **(571-273-8300).**

　　　　/Barry W Taylor/
Primary Examiner, Art Unit 2617